



## PATENT ABSTRACTS OF JAPAN

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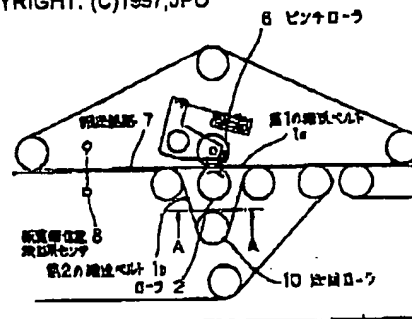
(54) DOUBLE FEED DETECTING DEVICE FOR PAPER SHEET

(57) Abstract

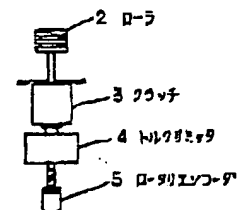
**PROBLEM TO BE SOLVED:** To prevent damaging a paper sheet so as to surely detect a double feed, by detecting a rotational speed of a roller arranged into contact with a conveying belt, and detecting the double feed from fluctuating the detected rotational speed.

**SOLUTION:** When a paper sheet is carried in a double feed detecting device, the paper sheet is interposed between conveying belts 1a, 1b and fed to a clearance between the conveying belt 1a and a roller 2. A tip end of the paper sheet in a conveying route 7 is detected by a paper sheet position detecting sensor 8, and after a prescribed time, a clutch 3 is turned ON and load torque of a torque limited 4 is transmitted to the roller 2. At this time the roller 2 rotates in a condition into contact with the conveying belt 1a, synchronously with the conveying belt 1a. When a double feed is generated a plurality of the paper sheets is judged by detecting fluctuating this rotational speed by a rotary encoder 5. Because of deceleration of a rotational speed of the roller 2 due to a slippage between first/second paper

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(a)



(b)